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(11)

EP 0 848 276 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

17.06.1998 Bulletin 1998/25

(51) Int. Cl.⁶: G02C 9/00

(21) Application number: 97121611.4

(22) Date of filing: 08.12.1997

(84) Designated Contracting States:

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE

Designated Extension States:

AL LT LV MK RO SI

(30) Priority: 13.12.1996 US 766327

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(54) Auxiliary lenses for eyeglasses

(57) An eyeglass device includes a primary frame (10) and an auxiliary frame (20) for supporting lenses. The primary frame (10) includes a magnetic connector (14) secured in the bridge (13). The auxiliary frame (20) includes a bridge (21) having a projection (22) for engaging over the bridge (13) of the primary frame (10)

and having a magnetic connector (24) for engaging with the connector (14) of the primary frame (10) such that the spectacle frames (10, 20) can be easily secured together with only one hand.

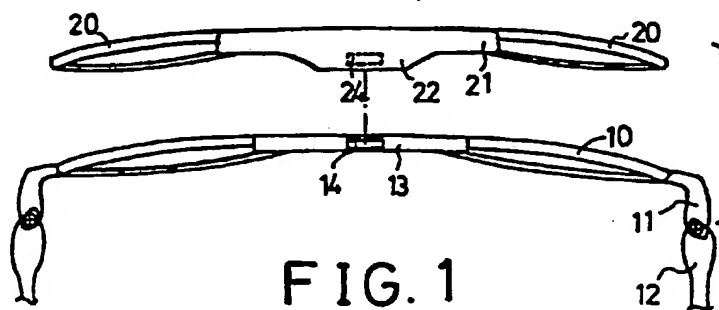


FIG. 1

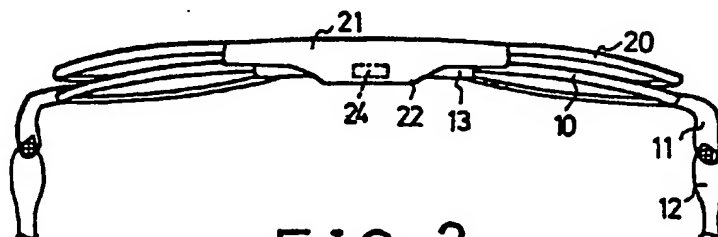


FIG. 2

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Description

The invention relates to an auxiliary frame for eyeglasses.

US Patent No. 5,568,207 to Chao comprise a primary frame having two magnet members provided on the upper side portions, and an auxiliary frame including a pair of arms each having a magnet member for engaging with that of the primary frame. Two hands are required for attaching the auxiliary frame to the primary frame.

The invention is to provide an auxiliary frame for engaging onto the primary frame by only one hand.

FIG. 1 is a top plan view showing a primary frame and an auxiliary frame separating from each other; FIG. 2 is a top plan view of the primary frame and the auxiliary frame combination; FIG. 3 is a front elevational view of the primary frame and the auxiliary frame combination; FIG. 4 is a cross sectional view taken along middle bridge portions of FIG. 2; FIGS. 5, 6, 7, 8 are cross sectional views similar to FIG. 4, showing four applications of the middle bridge portions of the eyeglass device; and FIG. 9 is a top plan view showing another application of the eyeglass device.

Referring to FIGS. 1 to 3, an eyeglass device comprises a primary frame 10 for supporting primary lenses and including two sides each having an extension 11 extended rearwardly for pivotally coupling a leg 12 and including a middle bridge 13 for supporting a magnetic or magnetizable connector 14. An auxiliary frame 20 may support the auxiliary lenses and includes a middle bridge 21 having a projection 22 extended rearward for extending over and for engaging with the bridge 13 of the primary frame 10 (FIGS. 2-4). The auxiliary frame 20 includes a magnetic or magnetizable connector 24 secured in the projection 22 for engaging with the connector 14 of the primary frame 10 such that the auxiliary frame 20 can be stably supported on the primary frame 10 (FIGS. 2-4).

The projection 22 is supported on the bridge 13 of the primary frame 10 such that the auxiliary frame 20 will not move downward relative to the primary frame 10 and will not disengage from the primary frame 10 when its user conducts jogging or jumping exercises.

The user is only required to engage the connector 24 of the auxiliary frame 20 with the connector 14 of the primary frame 10, such that the frames 10, 20 can be easily secured with each other. The user can thus easily use only one hand to stably attach the auxiliary frame to the primary frame. Alternatively, only one of the connectors 14, 24 is required to be a magnet. For example, if only connector 24 is provided as a magnet in the bridge 21 of the auxiliary frame, the connector 14 is not required to be a magnet, but could be composed typi-

cally of magnetic iron. It is only required to have the bridge 13 made by magnetically attractive material such that the bridge 21 of the auxiliary frame 20 may also be easily attached to the primary frame 10. Only one or one pair of magnetizable members are required to be a magnet for attaching the spectacle frames together.

The connector 24 may be slightly extended downward toward the connector 14 (FIG. 4). The bridges 13, 21 may be tilted (FIG. 5) or may include a flange 220 tilted downward (FIG. 6) for engaging with the bridge 13. The magnetic member 24 may be extended downward from the bridge 21 for engaging with a hole 131 of the bridge 13 (FIG. 7). The bridge 21 may include a C-shape having two magnetic members 24 engaged above and below the magnetic member 14 (FIG. 8). As shown in FIG. 9, the bridge 21 may include one or more hand grips 28 for facilitating the holding of the auxiliary frame, and may include a stop 29 extended downward from the bridge 21 for engaging with the bridge 13 and for preventing the bridge 21 from being disengaged from the bridge 13.

Accordingly, the eyeglass device includes an auxiliary frame that may be easily secured to the primary frame with only one hand.

Claims

1. An eyeglass device comprising:

- a primary frame (10) including a bridge (13), a first connector (14) secured in the bridge (13) of the primary frame (10), an auxiliary frame (20) including a bridge (21) for engaging with the bridge (13) of the primary frame (10), and a second connector (24) secured to the projection (22) of the auxiliary frame (20) for engaging with the first magnetic member of the primary frame (10) and for allowing the auxiliary frame (20) to be attached to the primary frame (10) with only one hand by a user.
- The eyeglass device as claimed in claim 1 further comprising magnetic means (14, 24) operatively associated with the first and second connectors (14, 24) for connecting the first and the second connectors (14, 24) together magnetically.
- The eyeglass device as claimed in claim 2, wherein the first connector (14) being a magnet, the second connector (24) being a magnetizable substance.
- The eyeglass device as claimed in claim 2, wherein the second connector (24) being a magnet, the first connector (14) being a magnetizable substance.
- The eyeglass device as claimed in claim 1, wherein the bridge (21) includes a projection (22) for engag-

ing with the bridge (13) of the primary frame.

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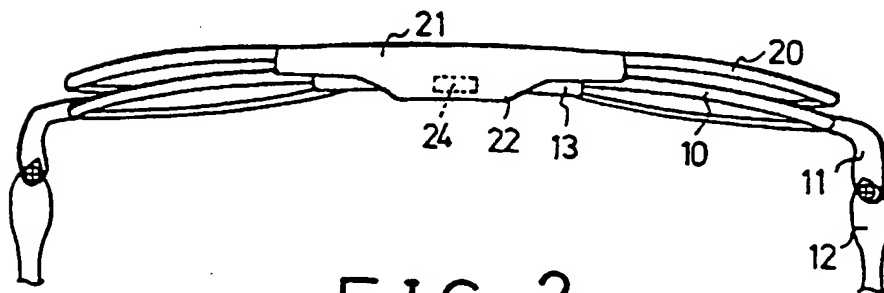
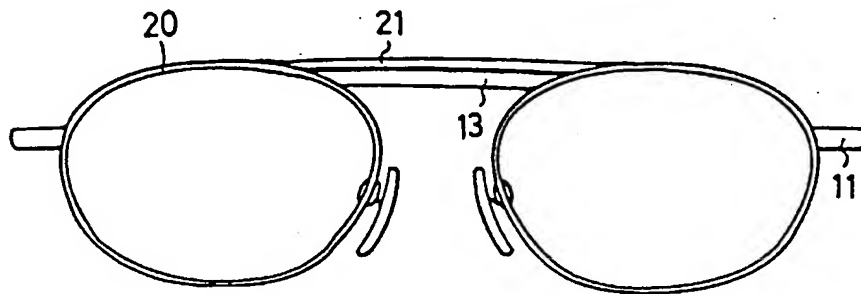
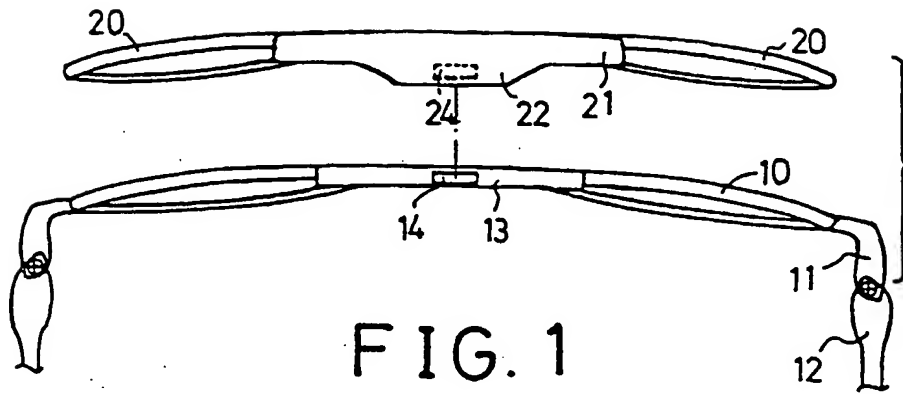
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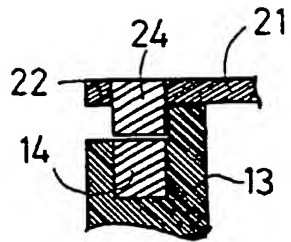


FIG. 4

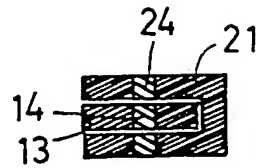


FIG. 8

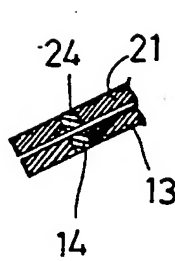


FIG. 5

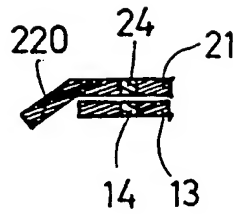


FIG. 6

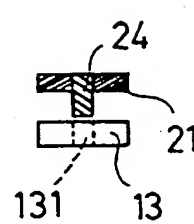


FIG. 7

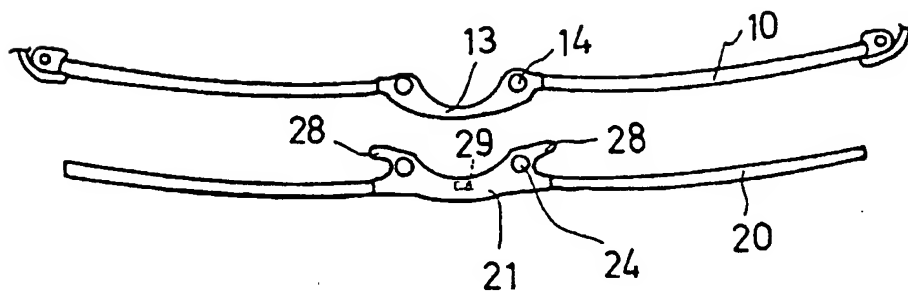


FIG. 9

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EUROPEAN SEARCH REPORT

Application Number
EP 97 12 1611

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.8)
X A	WO 90 09611 A (STEMME OTTO) * page 13, line 1 - line 12; figures 6-15 *	1,2 3-5	G02C9/00
Y	DE 85 07 761 U (SPORTIVE DESIGN U. VERTRIEB) * claims *	1-5	
Y	DE 88 06 898 U (E.H.C. ZEN) * page 13 - page 14; claims *	1-5	
D,A	US 5 568 207 A (CHAO RICHARD) * claims *	1-4	
A	US 5 416 537 A (SADLER FRANK) * abstract *	1-4	
A	DE 43 16 698 A (KARP LEILA) * abstract *	1-4	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			G02C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 2 March 1998	Examiner CALLEWAERT, H
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